



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/511,914
Source: Per 1/9
Date Processed by STIC: 10/29/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):
U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby,
Room 1B03, Arlington, VA 22202

Revised 05/17/04

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 10/511,914

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.

- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000

- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



PCT

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
 TIME: 11:21:35

Input Set : A:\Sequence listing.txt
 Output Set: N:\CRF4\10292004\J511914.raw

3 <110> APPLICANT: LOILER, SCOTT A.
 4 FLOTTE, TERENCE R.
 5 MUZYCZKA, NICHOLAS
 6 ATKINSON, MARK A.
 8 <120> TITLE OF INVENTION: IMPROVED rAAV VECTORS
 10 <130> FILE REFERENCE: 4300.014800
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/511,914
 13 <141> CURRENT FILING DATE: 2004-10-18
 15 <150> PRIOR APPLICATION NUMBER: PCT/US03/12225
 16 <151> PRIOR FILING DATE: 2003-04-17
 18 <150> PRIOR APPLICATION NUMBER: 60/373,419
 19 <151> PRIOR FILING DATE: 2002-04-17
 21 <160> NUMBER OF SEQ ID NOS: 49
 23 <170> SOFTWARE: PatentIn version 3.1
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 13
 27 <212> TYPE: PRT
 28 <213> ORGANISM: Homo sapiens
 30 <400> SEQUENCE: 1
 32 Ser His Leu Arg Lys Leu Arg Lys Arg Leu Arg Asp
 33 1 5 10
 36 <210> SEQ ID NO: 2
 37 <211> LENGTH: 13
 38 <212> TYPE: PRT
 39 <213> ORGANISM: Homo sapiens
 41 <400> SEQUENCE: 2
 43 Ser His Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg Asp
 44 1 5 10
 47 <210> SEQ ID NO: 3
 48 <211> LENGTH: 13
 49 <212> TYPE: PRT
 50 <213> ORGANISM: Pupaia glis
 52 <400> SEQUENCE: 3
 54 Ser His Leu Arg Lys Met Arg Lys Arg Leu Leu Arg Asp
 55 1 5 10
 58 <210> SEQ ID NO: 4
 59 <211> LENGTH: 13
 60 <212> TYPE: PRT
 61 <213> ORGANISM: Bos taurus
 63 <400> SEQUENCE: 4
 65 Ser His Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg Asp
 66 1 5 10
 69 <210> SEQ ID NO: 5

**Does Not Comply
 Corrected Diskette Needed**

ppr 2-6

RAW SEQUENCE LISTING

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Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10292004\J511914.raw

70 <211> LENGTH: 13
71 <212> TYPE: PRT
72 <213> ORGANISM: Homo sapiens
74 <400> SEQUENCE: 5
76 Ser His Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg Asp
77 1 5 10
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 13
82 <212> TYPE: PRT
83 <213> ORGANISM: Canis familiaris
85 <400> SEQUENCE: 6
87 Ser His Met Arg Lys Leu Arg Lys Arg Val Leu Arg Asp
88 1 5 10
91 <210> SEQ ID NO: 7
92 <211> LENGTH: 13
93 <212> TYPE: PRT
94 <213> ORGANISM: Rattus norvegicus
96 <400> SEQUENCE: 7
98 Ser His Leu Arg Lys Met Arg Lys Arg Leu Met Arg Asp
99 1 5 10
102 <210> SEQ ID NO: 8
103 <211> LENGTH: 13
104 <212> TYPE: PRT
105 <213> ORGANISM: Mus musculus
107 <400> SEQUENCE: 8
109 Ser His Leu Arg Arg Leu Arg Arg Arg Leu Leu Arg Asp
110 1 5 10
113 <210> SEQ ID NO: 9
114 <211> LENGTH: 13
115 <212> TYPE: PRT
116 <213> ORGANISM: Synthetic Peptides
118 <220> FEATURE:
119 <221> NAME/KEY: MISC_FEATURE
120 <222> LOCATION: (3)..(3)
121 <223> OTHER INFORMATION: X = Leu or Met
124 <220> FEATURE:
125 <221> NAME/KEY: MISC_FEATURE
126 <222> LOCATION: (5)..(5)
127 <223> OTHER INFORMATION: X = Lys or Arg
130 <220> FEATURE:
131 <221> NAME/KEY: MISC_FEATURE
132 <222> LOCATION: (6)..(6)
133 <223> OTHER INFORMATION: X = Leu or Met
136 <220> FEATURE:
137 <221> NAME/KEY: MISC_FEATURE
138 <222> LOCATION: (7)..(7)
139 <223> OTHER INFORMATION: X = Arg or Pro
142 <220> FEATURE:
143 <221> NAME/KEY: MISC_FEATURE

invalid <213> response - see
item 10
on Error
summary
sheet

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004

TIME: 11:21:35

Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10292004\J511914.raw

```

144 <222> LOCATION: (8)..(8)
145 <223> OTHER INFORMATION: X = Lys, Glu, Gln, or Arg
148 <220> FEATURE:
149 <221> NAME/KEY: MISC_FEATURE
150 <222> LOCATION: (10)..(10)
151 <223> OTHER INFORMATION: X = Leu or Val
154 <220> FEATURE:
155 <221> NAME/KEY: MISC_FEATURE
156 <222> LOCATION: (11)..(11)
157 <223> OTHER INFORMATION: X = Leu or Met
160 <400> SEQUENCE: 9
W--> 162 Ser His Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
163 1 5 10
166 <210> SEQ ID NO: 10
167 <211> LENGTH: 13
168 <212> TYPE: PRT
169 <213> ORGANISM: Synthetic Peptides
171 <220> FEATURE:
172 <221> NAME/KEY: MISC_FEATURE
173 <222> LOCATION: (3)..(11)
174 <223> OTHER INFORMATION: X = ANY AMINO ACID
177 <400> SEQUENCE: 10
W--> 179 Ser His Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
180 1 5 10
183 <210> SEQ ID NO: 11
184 <211> LENGTH: 10
185 <212> TYPE: PRT
186 <213> ORGANISM: Homo sapiens
188 <400> SEQUENCE: 11
190 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg
191 1 5 10
194 <210> SEQ ID NO: 12
195 <211> LENGTH: 10
196 <212> TYPE: PRT
197 <213> ORGANISM: Homo sapiens
199 <400> SEQUENCE: 12
201 Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg
202 1 5 10
205 <210> SEQ ID NO: 13
206 <211> LENGTH: 10
207 <212> TYPE: PRT
208 <213> ORGANISM: Tupaia glis
210 <400> SEQUENCE: 13
212 Leu Arg Lys Met Arg Lys Arg Leu Leu Arg
213 1 5 10
216 <210> SEQ ID NO: 14
217 <211> LENGTH: 10
218 <212> TYPE: PRT
219 <213> ORGANISM: Bos taurus

```

same error

RAW SEQUENCE LISTING

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Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10292004\J511914.raw

221 <400> SEQUENCE: 14
223 Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg
224 1 5 10
227 <210> SEQ ID NO: 15
228 <211> LENGTH: 10
229 <212> TYPE: PRT
230 <213> ORGANISM: Homo sapiens
232 <400> SEQUENCE: 15
234 Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg
235 1 5 10
238 <210> SEQ ID NO: 16
239 <211> LENGTH: 10
240 <212> TYPE: PRT
241 <213> ORGANISM: Canis familiaris
243 <400> SEQUENCE: 16
245 Met Arg Lys Leu Arg Lys Arg Val Leu Arg
246 1 5 10
249 <210> SEQ ID NO: 17
250 <211> LENGTH: 10
251 <212> TYPE: PRT
252 <213> ORGANISM: Rattus norvegicus
254 <400> SEQUENCE: 17
256 Leu Arg Lys Met Arg Lys Arg Leu Met Arg
257 1 5 10
260 <210> SEQ ID NO: 18
261 <211> LENGTH: 10
262 <212> TYPE: PRT
263 <213> ORGANISM: Mus musculus
265 <400> SEQUENCE: 18
267 Leu Arg Arg Leu Arg Arg Arg Leu Leu Arg
268 1 5 10
271 <210> SEQ ID NO: 19
272 <211> LENGTH: 10
273 <212> TYPE: PRT
274 <213> ORGANISM: Synthetic Peptides
276 <220> FEATURE:
277 <221> NAME/KEY: MISC_FEATURE
278 <222> LOCATION: (1)..(1)
279 <223> OTHER INFORMATION: X = Leu or Met
282 <220> FEATURE:
283 <221> NAME/KEY: MISC_FEATURE
284 <222> LOCATION: (3)..(3)
285 <223> OTHER INFORMATION: X = Lys or Arg
288 <220> FEATURE:
289 <221> NAME/KEY: MISC_FEATURE
290 <222> LOCATION: (4)..(4)
291 <223> OTHER INFORMATION: X = Leu or Met
294 <220> FEATURE:
295 <221> NAME/KEY: MISC_FEATURE

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DATE: 10/29/2004

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Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10292004\J511914.raw

296 <222> LOCATION: (5)..(5)
 297 <223> OTHER INFORMATION: X = Arg or Pro
 300 <220> FEATURE:
 301 <221> NAME/KEY: MISC_FEATURE
 302 <222> LOCATION: (6)..(6)
 303 <223> OTHER INFORMATION: X = Lys, Glu, Gln, or Arg
 306 <220> FEATURE:
 307 <221> NAME/KEY: MISC_FEATURE
 308 <222> LOCATION: (8)..(8)
 309 <223> OTHER INFORMATION: X = Leu or Val
 312 <220> FEATURE:
 313 <221> NAME/KEY: MISC_FEATURE
 314 <222> LOCATION: (9)..(9)
 315 <223> OTHER INFORMATION: X = Leu or Met
 318 <400> SEQUENCE: 19
 W--> 320 Xaa Arg Xaa Xaa Xaa Arg Xaa Xaa Arg
 321 1 5 10
 324 <210> SEQ ID NO: 20
 325 <211> LENGTH: 10
 326 <212> TYPE: PRT
 327 <213> ORGANISM: Synthetic Peptides
 329 <220> FEATURE:
 330 <221> NAME/KEY: MISC_FEATURE
 331 <222> LOCATION: (1)..(9)
 332 <223> OTHER INFORMATION: X = ANY AMINO ACID
 335 <400> SEQUENCE: 20
 W--> 337 Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg
 338 1 5 10
 341 <210> SEQ ID NO: 21
 342 <211> LENGTH: 18
 343 <212> TYPE: PRT
 344 <213> ORGANISM: Synthetic Peptides
 346 <400> SEQUENCE: 21
 348 Asp Trp Leu Lys Ala Phe Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu
 349 1 5 10 15
 352 Ala Phe
 356 <210> SEQ ID NO: 22
 357 <211> LENGTH: 28
 358 <212> TYPE: PRT
 359 <213> ORGANISM: Synthetic Peptides
 361 <400> SEQUENCE: 22
 363 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp Trp Leu Lys Ala Phe
 364 1 5 10 15
 367 Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu Ala Phe
 368 20 25
 371 <210> SEQ ID NO: 23
 372 <211> LENGTH: 28
 373 <212> TYPE: PRT
 374 <213> ORGANISM: Synthetic Peptides

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/511,914

DATE: 10/29/2004
TIME: 11:21:36

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10292004\J511914.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. ~~3,5,6,7,8,10,11~~

Seq#:10; Xaa Pos. ~~3,5,6,7,8,10,11~~

Seq#:19; Xaa Pos. ~~1,3,4,5,6,8,9~~

Seq#:20; Xaa Pos. ~~1,3,4,5,6,8,9~~

Seq#:30; Xaa Pos. 1,3,4,5,6,8,9

Seq#:31; Xaa Pos. 1,3,4,5,6,8,9

Seq#:47; Xaa Pos. 1,2,3,4,5,6,7,8

VERIFICATION SUMMARY

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Input Set : A:\Sequence listing.txt

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L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:525 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:754 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0